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APPLICANT: FUJI HEAVY IND LTD;

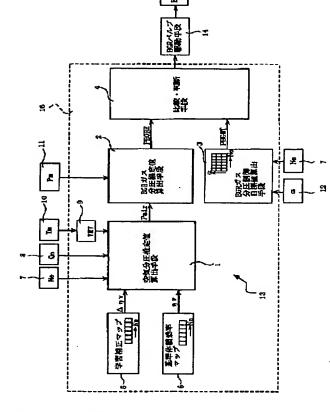
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TITLE

EGR CONTROLLER FOR ENGINE



ABSTRACT :

PROBLEM TO BE SOLVED: To suitably supply an EGR rate at all times by finding out an estimating value of air partial pressure on the basis of a control parameter including a volume efficiency of an engine, utilizing it for feedback control of the EGR rate, and learning and correcting the volume efficiency at the time of non-EGR operation.

SOLUTION: Sensor values such as engine rotating speed Ne and an intake air rate Qa are calculated by air partial pressure calculating means 1 in a main control unit 16, and air partial pressure in an intake pipe is calculated as an air partial pressure estimating value using a volume efficiency which is learnt and corrected at the time of non-EGR operation, and which is read on the basis of a gas temperature and the like by a coefficient calculating means 9. Calculation is carried out as an EGR gas partial pressure estimating value using pressure Pm in the intake pipe and an air partial pressure estimating value by an EGR gas partial pressure estimating value calculating means 2. An EGR valve 15 is controlled on the basis of a result obtained by comparing an estimating value with a control target value of EGR gas partial pressure found out on the basis of a throttle opening  $\alpha$  and engine rotating speed Ne, by a control target value calculating means 3.

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